



General

Guideline Title

Surgical abortion prior to 7 weeks of gestation.

Bibliographic Source(s)

Lichtenberg ES, Paul M. Surgical abortion prior to 7 weeks of gestation. Contraception. 2013 Jul;88(1):7-17. [90 references] [PubMed](#)

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The levels of recommendations (A, B, C) are defined at the end of the "Major Recommendations" field.

Conclusions and Recommendations

The following recommendations are based on good and consistent scientific evidence (Level A):

- Early surgical abortion carries lower morbidity and mortality than procedures performed later in gestation. In addition, early aspiration may expedite the diagnosis of ectopic pregnancy, resulting in less invasive treatment.
- Manual vacuum aspiration (MVA) and electric vacuum aspiration (EVA) for first-trimester abortion have comparably high efficacy, safety and patient acceptability.
- Immediate gross examination of the aspirate is important in discovering failed attempted abortion, retained tissue and ectopic pregnancy. Compared to EVA, use of MVA does not improve the ability of the clinician to accurately detect products of conception in the aspirate following surgical abortion at less than 6 weeks of gestation.
- Clinical outcomes are indistinguishable in comparable, suitably equipped inpatient and outpatient abortion settings staffed with well-trained personnel.
- Licensed or accredited midlevel providers with the requisite training are able to perform first-trimester surgical abortion procedures with outcomes comparable to those of their physician counterparts.

The following recommendations are based on limited or inconsistent scientific evidence (Level B):

- Surgical abortion can be performed successfully and safely as early as 3 weeks from the onset of last menses if a protocol exists that includes sensitive pregnancy testing, immediate and meticulous examination of the aspirate, and assiduous follow-up of questionable specimens to rule out ectopic pregnancy or continuing gestation.
- In contrast to the vacuum method for early induced abortion, use of sharp or blunt curettage (dilation and curettage) for pregnancy

termination is associated with a modest increase in blood loss, uterine or cervical injury (including endometrial abrasion), and retained tissue. No studies are available to assess whether sharp curettage abortion increases long-term risk of developing intracavitary adhesions, cervical stenosis or subfertility.

- In abortion settings where gross or microscopic examination of pregnancy tissue is routinely carried out by well-trained and experienced staff members and where local or regional laws mandating outside pathologic examination do not supervene, routine outside pathologic referral of tissue aspirates adds little diagnostic value.
- Complication rates are higher for clinicians with less experience in surgical abortion provision.

The following recommendations are based primarily on consensus or expert opinion (Level C):

- Confirmation of pregnancy prior to uterine aspiration is standard practice in modern medical settings. Occasionally, even in expert hands, false-positive results can occur.
- Cost depends largely on the prevailing wage differential between advanced practice clinicians who often staff medical abortion programs and the providers who perform surgical abortions.

Definitions:

Levels of Recommendations

Level A: Recommendations are based primarily on good and consistent scientific evidence.

Level B: Recommendations are based primarily on limited or inconsistent scientific evidence.

Level C: Recommendations are based primarily on consensus and expert opinion.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Unwanted pregnancy

Guideline Category

Management

Treatment

Clinical Specialty

Family Practice

Internal Medicine

Obstetrics and Gynecology

Intended Users

Advanced Practice Nurses

Physician Assistants

Physicians

Public Health Departments

Guideline Objective(s)

- To review the medical literature on surgical abortion prior to 7 weeks gestation
- To address the contemporary practice of surgical abortion before 7 weeks of gestation, focusing on issues of safety, efficacy, benefits, risks and acceptability

Target Population

Women with verified pregnancy (as early as 3 weeks from the start of last menses) seeking abortion before 7 weeks of gestation

Interventions and Practices Considered

1. Confirmation of pregnancy prior to uterine aspiration
2. Early surgical abortion
 - Manual vacuum aspiration (MVA)
 - Electric vacuum aspiration (EVA)
 - Use of sharp or blunt curettage (dilation and curettage)
3. Immediate gross examination of the aspirate to discover failed attempted abortion, retained tissue, and ectopic pregnancy
4. Use of licensed or accredited midlevel providers with the requisite training to perform abortions

Major Outcomes Considered

- Morbidity and mortality
- Cost
- Risk of ongoing pregnancy
- Success and failure rates
- Complication rates
- Acceptability rates

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The authors used MEDLINE and PubMed databases (searched from 1955 to February 2012), the Cochrane Database of Systematic Reviews and personal files to identify information relevant for review in the English language literature. The authors also culled abstracts in all languages (e.g., Chinese). Search terms included, but were not limited to, early surgical abortion; early vacuum aspiration; early induced abortion; electric vacuum aspiration; manual vacuum aspiration; early medical abortion; failed attempted abortion; ectopic pregnancy and menstrual regulation. The bibliographies of identified articles, and citations within those bibliographies, supplied additional sources for review.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Studies were reviewed and evaluated for quality according to the method outlined by the U.S. Preventive Services Task Force:

I: Evidence obtained from at least one properly designed randomized controlled trial.

II-1: Evidence obtained from well-designed controlled trials without randomization.

II-2: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

Methods Used to Analyze the Evidence

Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Levels of Recommendations

Level A: Recommendations are based on good and consistent scientific evidence.

Level B: Recommendations are based on limited or inconsistent scientific evidence.

Level C: Recommendations are based primarily on consensus and expert opinion.

Cost Analysis

One study compared the cost of outpatient manual vacuum aspiration (MVA) under local anesthesia with the cost of medical abortion using methotrexate and misoprostol in a state that allowed only physicians to perform surgical abortion. Compared to time spent with each surgical

abortion patient, mean staff time per medical abortion patient was longer (58 vs. 46 min, respectively; $p=.01$); however, medical abortions were less likely to involve a physician. The researchers concluded that if the pay scale of a physician was twice that of a physician assistant, the staff costs associated with each abortion method would be about identical.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

These guidelines were reviewed and approved by the Board of Directors of the Society of Family Planning.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate care and management of surgical abortion prior to 7 weeks of gestation

Potential Harms

- Both medical and surgical abortion procedures carry risk of complications. One Finnish study used a database that included more than 20,000 abortions of each type. Medical abortion regimens, which used mifepristone alone or in combination with one of several prostaglandins in unspecified doses, had complication rates exceeding those of surgical abortion for hemorrhage (15.6% vs. 2.1%, $p<.001$), incomplete abortion (6.7% vs. 1.6%, $p<.001$), and rescue curettage/reaspiration (5.9% vs. 1.8%, $p<.001$).
- Women requesting early abortion may lack definitive evidence of an intrauterine pregnancy on ultrasound, and products of conception may be difficult to identify in the aspirate. Therefore, providers must remain vigilant for failed attempted abortion and ectopic pregnancy.
- Limited evidence suggests that, when performed by a single practitioner, a uniform surgical protocol combining routine pre- and postoperative transvaginal ultrasound, an adequate-sized cannula and meticulous tissue inspection (with manual or colposcopic magnification as needed) results in impressively low rates of failed attempted abortion (about 1 per 1000). Failure rates may be somewhat higher (14–23 per 1000) in community-based practices employing multiple providers with varying preferred surgical practices. Specific protocol elements that contribute most to the difference in rates remain unclear.
- In a retrospective cohort study of women who had manual vacuum aspiration (MVA) ($n=1002$) or electric vacuum aspiration (EVA) ($n=724$) at a US hospital-based ambulatory clinic, the frequency of reaspiration was 2.2% and 1.7%, respectively ($p=.43$); however, only 37 procedures occurred at less than 6 weeks' gestation. In these studies, other complications were infrequent ($\leq 2\%$ for presumed infection and $<1\%$ for conservatively managed uterine perforation) and did not differ by abortion method.
- Women's objective pain ratings do not differ significantly for the two methods (EVA vs. MVA), even though women may find the noise of electric suction bothersome or subjectively associate it with increased pain.
- In contrast to the vacuum method for early induced abortion, use of sharp or blunt curettage (dilation and curettage) for pregnancy termination is associated with a modest increase in blood loss, uterine or cervical injury (including endometrial abrasion), and retained tissue.
- Complication rates are higher for clinicians with less experience in surgical abortion provision.

Qualifying Statements

Qualifying Statements

This evidence-based review should guide clinicians, although it is not intended to dictate clinical care.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Safety

Timeliness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2013 Jul

Guideline Developer(s)

Society of Family Planning - Professional Association

Source(s) of Funding

The Society of Family Planning receives no direct support from pharmaceutical companies or other industries.

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

Authors: E. Steve Lichtenberg, MD, MPH, and Maureen Paul, MD, MPH, with administrative assistance from Laura Dodge, MPH

Financial Disclosures/Conflicts of Interest

E. Steve Lichtenberg, MD, MPH, and Maureen Paul, MD, MPH, report no significant relationships with industries relative to these guidelines.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the [Society of Family Planning Web site](#) .

Availability of Companion Documents

None available

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on January 13, 2014. The information was verified by the guideline developer on February 10, 2014.

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